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## **Arnold Edward Ortmann, A Bibliography of his Work on Mollusks, with a Catalogue of his Recent Molluscan Taxa**

By RICHARD I. JOHNSON

Arnold Edward Ortmann was the foremost student of the Unionacea, or freshwater mussels, of the United States during the first quarter of this century. Simpson completed his important world-wide revision of the Unionacea, "Synopsis of the Naiades," in 1900 which was expanded, with little change, into "A Descriptive Catalogue of the Naiades" (1914). Ortmann augmented Simpson's system, with his careful work on the morphology and classification of the Unionacea based on anatomy, especially the structure of the gills (1912). He also studied the zoogeography of the unionid species in, "The Alleghenian Divide, and its Influence upon the Freshwater Fauna" (1913). These works quickly established Ortmann as America's leading unionid expert.

Ortmann was born in Magdeburg, Saxony, April 8, 1863. He studied at the universities of Kiel, Strasbourg and Jena. At Jena he received his Ph.D. in 1885. He was one of Ernst Haeckel's favorite pupils. When Haeckel went on an expedition to Zanzibar, he took Ortmann with him as an assistant. For a time Ortmann was an instructor in the University of Strassburg. His first two works on mollusks concerned collections of Cephalopods at the Strasbourg Museum made by Döderlein in Japan (1888) and the Sarasins in Ceylon (1891).

Ortmann came to the United States in 1894 and became



Plate 26

Arnold E. Ortmann (1863-1927), a previously unpublished portrait. Courtesy, J. J. Parodiz, Carnegie Museum.

curator of invertebrate paleontology at Princeton University where he remained until 1903 when he then became curator of invertebrate zoology in the Carnegie Museum where he remained until his death on January 3, 1927.

His extensive report on the Tertiary Invertebrates of the Princeton-Patagonia Expeditions (1896-1899) appeared in 1902 and contained the descriptions of numerous fossil marine mollusks.

Ortmann did not confine his zoogeographical studies just to the Unionacea. He was also interested in Crustacea and published, "The Geographical Distribution of Freshwater Decapods, and its Bearing on Ancient Geography" (1902). His work on the crayfishes of Pennsylvania (1906) also contains an important discussion on their zoogeography.

Ortmann's two most elegant works on the Unionacea are on those of Pennsylvania (1911, 1919) and of South America (1921). These volumes were grandly printed in quarto with excellent illustrations, as Memoirs of the Carnegie Museum. Among Ortmann's other faunal studies of the naiades were those of the Tennessee River (1918, 1925), the Duck River (1924) and the Green River (1926).

Pilsbry (1927: 111) says of Ortmann that he was, "cordial and prepossessing in manner. His enthusiasm for natural history was contagious, and contributed to his success as a teacher. (He held various teaching positions at the University of Pittsburgh, which in 1911 conferred on him the degree of Sc.D.). In the field he was indefatigable never sparing himself, deterred by neither exposure nor fatigue, in the quest of specimens for his researches."

One can best understand Ortmann's attitude toward his work by quoting from a letter of his to Calvin Goodrich (December 15, 1910) quoted by van der Schalie (1951: 135):

Do not feel alarmed about having used any information received from me in any way you see fit. I am not jealous, and anybody is welcome to use and to *criticise* whatever I may say in private correspondence. I also do not object if anybody *publishes* anything for I am not working for my personal benefit but for the good of science, and I know myself best that I cannot work out everything myself. I wish I could induce many more conchologists to work along the same lines I am working.

Ortmann was survived by his wife, one son and two married daughters.

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## ACKNOWLEDGEMENTS

Special thanks are extended to Dr. J. José Parodiz, Carnegie Museum, Pittsburgh, who, at my request, chose many of the lectotypes selected in this paper. He also kindly gave me access to Ortmann's types, afforded me his synonymies of some of the taxa, and made available the hitherto unpublished photograph of Ortmann used here. Thanks are also extended to Dr. Kenneth J. Boss for reading the manuscript.

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RECENT GENERIC AND SPECIFIC MOLLUSCAN TAXA INTRODUCED  
BY ARNOLD EDWARD ORTMANN.

For convenience of reference, the following list is arranged alphabetically by species, with the original references, type localities (locality data in brackets were found on original labels or are additions from recent maps), and the location of the extant types.

Higher categories, and the fossil marine mollusks described in the report on the Princeton-Patagonia Expedition (1902), are *not* included.

ABBREVIATIONS

CM—Carnegie Museum, Pittsburgh, Pennsylvania

MCZ—Museum of Comparative Zoology, Cambridge, Massachusetts

*Alasminota*, Subgenus: 1914, *Nautilus* 28: 41. Type species, *Margaritana holstonia* Lea, original designation.

- analoga*, *Fusconaia cor* Plate 27, fig. 1  
1918, Proc. Amer. Philos. Soc. 57: 533. Ortmann refers to Reeve, Conch. Iconica 16, *Unio*, pl. 15, species 65 (Tennessee River). This indicated specimen is the holotype, British Museum (Nat. Hist.) 1964117. The type locality is restricted to the Clinch River, Speers Ferry, Scott Co., Virginia from whence came Ortmann's specimens, CM 61.6326. Discussed by Parodiz, 1967, Sterkiana, no. 28: 23.
- Arkansia* Ortmann and Walker, Genus: 1912, Nautilus 25: 97. Type species, *Arkansia wheeleri* Ortmann and Walker, original designation.
- aspersa*, *Loligo*: 1888, Zool. Jahr. 3: 661, pl. 25, fig. 3 (Kochi [Japan]). Type in Strasbourg Museum.
- berthae*, *Diplodon*: 1921, Mem. Carnegie Mus. 8: 528, pl. 38, figs. 1-4 (Rio Jacuhy, Cachoeira, Rio Grande do Sul, Brazil). Lectotype, here selected, CM 61.5865 specimen no. 24, pl. 38, fig. 1 a-d; paralectotype MCZ 100974. Is *Diplodon picens* (Lea) teste Parodiz.
- brocki*, *Octopus*: 1888, Zool. Jahr. 3: 645, pl. 21, fig. 4, pl. 22, fig. 1 (Tokiobai and Kagoshima [Japan]). Types in Strasbourg Museum.
- cohongoronta*, *Lampsilis ventricosa*: 1912, Nautilus 26: 53 (Potomac River, Hancock, Washington Co., Maryland). Lectotype selected by Parodiz, 1967, Sterkiana, no. 28: 28, CM 61.3999. Figured by Johnson, 1970, Bull. Mus. Comp. Zool. 140: 386, pl. 21, fig. 1; allotype CM 61.4000, pl. 21, fig. 2; 2 paralectotypes MCZ 273128.
- Cumberlandia*, Genus: 1912, Nautilus 26: 13. Type species, *Unio monodonta* Say, original designation.
- decipiens*, *Diplodon*: 1921, Mem. Carnegie Mus. 8: 499, pl. 36, figs. 3-6 (Creek, tributary to the Rio Iguassú. Serrinha, Paraná, Brazil). Lectotype, here selected, CM 61.9253, specimen no. 4, pl. 36, fig. 3 a-d. Is *Diplodon martensi* Ihering teste Parodiz.
- döderleini*, *Tremoctopus*: 1888, Zool. Jahr. 3: 642, pl. 20 (Tokiobai [Japan]). Type in Strasbourg Museum.



- enno*, *Diplodon*: 1921, Mem. Carnegie Mus. 8: 531, pl. 38, figs. 5–8 (Rio Grande, Boqueirão, Bahia, Brazil, S. Francisco drainage). Lectotype, here selected, CM61.9264 specimen no. 1, pl. 38, fig. 7. Is *Diplodon rotundus enno teste* Parodiz.
- framea*, *Sepia*: 1891, Zool. Jahr. 5: 675, pl. 46, fig. 2 (Ceylon). Type in Strasbourg Museum.
- Friersonia*, Genus: 1912, Ann. Carnegie Mus. 8: 318. Type species, *Lampsilis iridella* Pilsbry and Frierson, original designation.
- hasemani*, *Anodontites*: 1921, Mem. Carnegie Mus. 8: 609, pl. 42, figs. 6,7 (headwaters of the Rio Paraguay, Santa Rita, Matto Grosso, Brazil). Lectotype, here selected, CM 61.5823, specimen no. 3, pl. 42, fig. 7 a–b.
- hasemani*, *Diplodon*: 1921, Mem. Carnegie Mus. 8: 478, pl. 34, figs. 1–4 (Rio Guaporé, near Rio São Simão, Matto Grosso, Brazil). Lectotype, here selected, CM 61.5857 specimen no. 10. pl. 34, fig. 1 a–b. Is *Diplodon guaranianus* (Orbigny) *teste* Parodiz.
- hildae*, *Diplodon*: 1921, Mem. Carnegie Mus. 8: 514, pl. 36, fig. 7, pl. 37, figs. 1–3 (Rio Jacuhy, Cachoeira, Rio Grande do Sul, Brazil). Lectotype, here selected, CM 61.5864, specimen no. 16, pl. 36, fig. 7 a–b. Is *Diplodon picens* (Lea) *teste* Parodiz.
- hollandi*, *Monocondylaea*: 1921, Mem. Carnegie Mus. 8: 585, pl. 41, fig. 1 (Sand bar of Rio Guaporé, near Rio São Simão, Matto Grosso, Brazil). Holotype CM 61.5856.
- hoylei*, *Sepia*: 1888, Zool. Jahr. 3: 650, pl. 22, fig. 5 pl. 23, fig. 1 (Maizura, Tokiobai, Kadsiyama. Enoshima, Kochi, Kagoshima [Japan]). Types in Strasbourg Museum.
- hyrioides*, *Anodontites*: 1921, Mem. Carnegie Mus. 8: 604, pl. 42, figs. 3–5 (Rio Tapajos, Santarem, Para, Brazil). Lectotype, here selected, CM 61.5829, specimen no. 6, pl. 42, fig. 3 a–b.

- imitator*, *Diplodon*: 1921, Mem. Carnegie Mus. 8: 491, pl. 34, figs. 5-7, pl. 35, figs. 1, 2 (Rio Vaccahy-mirim, Santa Maria, Rio Grande do Sul, Brazil). Lectotype, here selected, CM 61.9248, specimen no. 29, pl. 34, fig. 5 a-d. Is *Diplodon martensi* Ihering teste Parodiz.
- kagoshimensis*, *Octopus*: 1888, Zool. Jahr. 3: 644, pl. 21, fig. 2 (Kagoshima [Japan]). Type in Strasbourg Museum.
- leucogona*, *Fusconaja* [*sic*] *subrotunda* Plate 27, fig. 2 1913, Nautilus 27: 89 (Elk River, Gassaway Braxton Co., West Virginia). Lectotype, here selected, CM 61.5239 specimen A (not 61.5399 as indicated in the description. *teste*: Parodiz, 1967, Sterkiana, no. 28: 23). Paralectotype MCZ 293011; paralectotype Ohio State Museum 18117.
- Lexingtonia*, Genus: 1914, Nautilus 28: 28. Type species, *Unio subplanus* Conrad, original designation.
- microcotyledon*, *Sepia*: 1891, Zool. Jahr. 5: 673, pl. 46, fig. 1 (Ceylon). Type in Strasbourg Museum.
- Microteuthis*, Genus: 1888, Zool. Jahr. 3: 648. Type species, *Microteuthis paradoxa* Ortmann, monotypic.
- mogymirim*, *Diplodon*: 1921, Mem. Carnegie Mus. 8: 520, pl. 37, figs. 4-7 (Creek near Mogy Mirim, São Paulo, Brazil, tributary to Rio Mogy Guassú and Rio Grande, upper Paraná drainage). Lectotype, here selected, CM 61.9260 specimen no. 22, pl. 37, fig. 4 a-c. Is *Diplodon expansus* (Küster) teste Parodiz.
- obesa*, *Monocondylaea*: 1921, Mem. Carnegie Mus. 8: 583, pl. 40, figs. 4-6 (Rio Tapajos, Santarem, Pará, Brazil). Lectotype, here selected, CM 61.5850 specimen no. 10, pl. 40, fig. 4 a-c.
- paradoxa*, *Microteuthis*: 1888, Zool. Jahr. 3: 649, pl. 22, fig. 4 (Kadsiyama [Japan]). Type in Strasbourg Museum.
- Prolasmidonta*, Subgenus: 1914, Nautilus 28: 44. Type species, *Unio heterodon* Lea, original designation.
- Quincuncina*, Genus: 1922, Nautilus 36: 1. Type species, *Quincuncina burkei* Walker, original designation.

- Scalenilla* Ortmann and Walker, Subgenus: 1922, Occ. Papers Mus. Zool. Univ. Michigan, no. 112, p. 68. Type species, *Unio sulcatus* Lea, original designation.
- simillimus*, *Diplodon*: 1921, Mem. Carnegie Mus. 8: 495, pl. 35, figs. 3–6 (Rio Nhundiaquara, Morretes, Paraná, Brazil). Lectotype, here selected, CM 61.9250 specimen no. 22, pl. 35, fig. 5 a–d; 2 paralectotypes MCZ 47050. Is *Diplodon martensi* Ihering teste Parodiz.
- singhalensis*, *Loligo*: 1891, Zool. Jahr. 5: 676, pl. 46, fig. 3 (Ceylon). Type in Strasbourg Museum.
- susquehannae*, *Alasmidonta* (*Decurambis*) *marginata*: 1919, Mem. Carnegie Mus. 8: 187, pl. 12, fig. 4 (Susquehanna River, Selinsgrove, Snyder Co., Pennsylvania). Figured holotype CM 61.4679, selected as lectotype by Parodiz 1967, Sterkiana, no. 28: 26; paratype Ohio State Museum 18118.
- tetradynamia*, *Loligo*: 1888, Zool. Jahr. 3: 659, pl. 23, fig. 4, pl. 25, fig. 1 (Tokiobai [Japan]). Types in Strasbourg Museum.
- tokioensis*, *Sepia*: 1888, Zool. Jahr. 3: 653, pl. 23, fig. 3 (Tokiobai [Japan]). Types in Strasbourg Museum.
- torosa*, *Sepia*: 1888, Zool. Jahr. 3: 652, pl. 23, fig. 2 (Tokiobai [Japan]). Type in Strasbourg Museum.
- tritogonia*, *Quadrula*: 1909, Nautilus 22: 101. New name for *Unio tuberculatus* Barnes 1823 when *Obliquaria tuberculata* Rafinesque 1820 and it were both considered as in the genus *Quadrula*.
- Truncillopsis* Ortmann and Walker, Subgenus: 1922, Occ. Papers Mus. Zool. Univ. Michigan, no. 112, p. 65. Type species, *Truncilla triqueter* Rafinesque, original designation.
- vicarius* *Diplodon*: 1921, Mem. Carnegie Mus. 8: 497, pl. 35, figs. 7, 8, pl. 36, figs. 1, 2 (in creeks, Aqua Quente, 8 miles from Iporanga, São Paulo, Brazil). Lectotype, here selected, CM 61.9251 specimen no. 15, pl. 35, fig. 8. Is *Diplodon martensi* Ihering teste Parodiz.

*wheeleri* Ortmann and Walker, *Arkansia*: 1912, Nautilus 25: 98, pl. 8 (Old River, a bayou of the Ouachita River) Arkadelphia, Clark Co., Arkansas. Figured holotype Museum of Zoology, University of Michigan 105514; paratypes MCZ 135712, 23319, and 45759; 2 paratypes CM 61.6162. Discussed by Parodiz, 1967, *Sterkiana*, no. 28:25.

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## Plate 27

- Fig. 1. *Fusconaia cor analoga* Ortmann. [Clinch River, Speers Ferry, Scott Co., Virginia]. Holotype British Museum (Nat. Hist.) 1964117. Length 47 mm, height 36 mm, width 20 mm.
- Fig. 2. *Fusconaja* [*sic*] *subrotunda leucogona* Ortmann. Elk River, Gassaway, Braxton Co., West Virginia. Lectotype Carnegie Museum 61.5239, specimen A. Length 91 mm, height 68 mm, width 35 mm. Male.

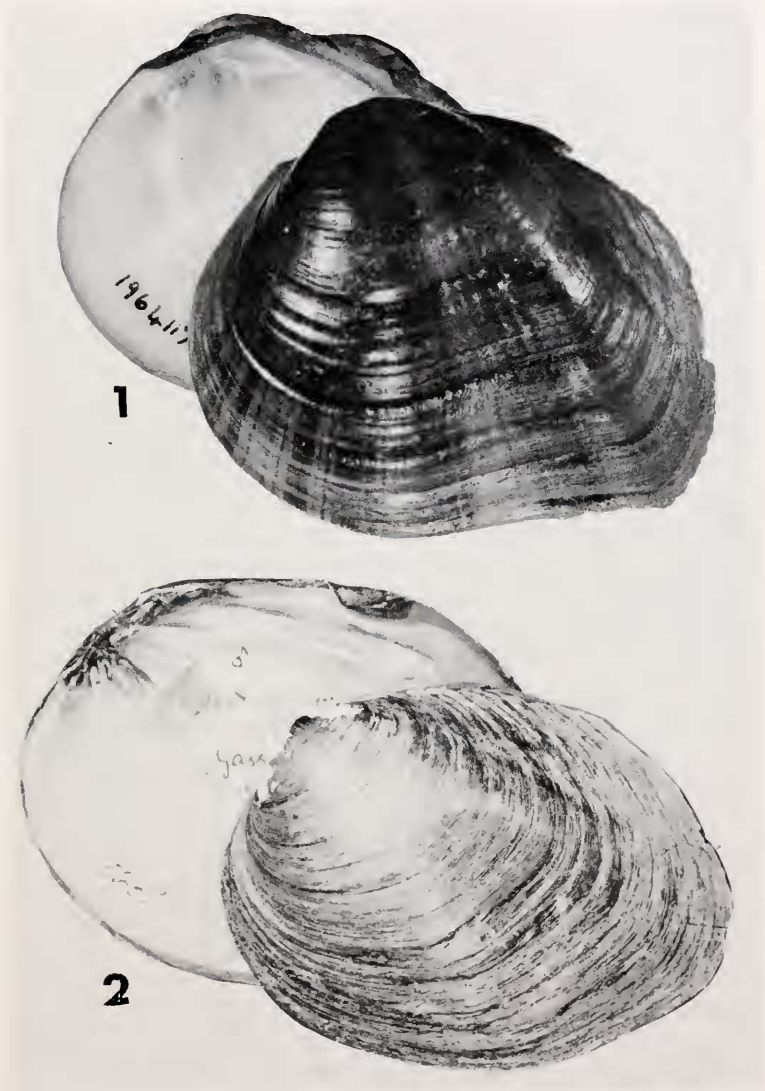


Plate 27

## The Carnegie Museum, its Collections and Curators of Mollusks

By RICHARD I. JOHNSON

The Carnegie Museum opened in November of 1895 with Herbert Huntington Smith in charge of Invertebrate Zoology. At first the mollusk collection consisted only of Smith's, a general one, representing some 3,000 species. To this was soon added the collection of F. R. Holland, containing some 6,000, which included specimens identified by C. B. Adams, T. Bland, J. G. Anthony, and Isaac Lea. In 1899 Smith left to collect specimens in South America. During 1890 George Hubbard Clapp (1859-1949) was appointed Honorary Curator of the Department. He was a wealthy man, a trustee of the museum, with a special interest in the land and freshwater mollusks of North America. Between 1893 and 1927 he contributed 64 articles on mollusks to the *Nautilus*. In 1902, the important collection of *Partula* made by William Dell Hartmann (1817-1899) was purchased, along with his general collection of 9,000 species. His collection of the Hawaiian terrestrial family Achatinellidae had been previously sold to the Natural History Museum in Bremen, Germany. Smith, having returned to the museum, prepared an annotated catalogue of the Hartman *Partula* (1902). In 1903 Smith retired to become Curator of the Alabama State Museum of Natural History. There, through exchange and by extensive collecting, he built an important collection of freshwater mollusks.

In July 1903, Arnold E. Ortmann was appointed Curator of Invertebrate Zoology (exclusive of Insects), and the Carnegie Museum soon became a major center for the study of Unionidae. Not only did Ortmann enrich the collection with the specimens he gathered himself, but his reputation was such that he received unionids from almost all of his interested contemporaries. In 1904, the museum purchased marine shells collected by the *Porcupine* and *Valorous* expeditions from the London shell dealer, of dubious reputation, H. B. Preston.

In 1909 Victor Sterki (1846-1933) was appointed an Honorary Assistant in the department of Invertebrate

Zoology. His extensive collection of Pupillidae and Sphaeriidae, consisting of some 12,000 identified and catalogued lots had been purchased in 1906. Sterki worked mainly, in absentia, from his home in New Philadelphia, Ohio, though he and Ortmann were in the field collecting together during 1911.

Ortmann worked with graduate students from the University of Pittsburgh (which is just across the street from the Museum). During 1913 the collection of shells was moved to its present location and here Ortmann supervised the Doctoral thesis of Miss M. A. Moldenhauer on the Glochidea of Najades. Ortmann's most prolific student was Norman MacDowell Grier (1890-1951) who arrived in 1915 and "was assigned a table in the laboratory of invertebrate zoology, where he took up biometric work on the Najades of Lake Erie." Also present at other tables were Miss Moldenhauer and Miss. E. C. Carter, who were also working for advanced degrees. Grier received his Ph.D. from the University of Pittsburgh in 1919 and went on to make a significant contribution to the study of Unionidae. In 1922, G. H. Ball, another Doctoral candidate from the University, published his thesis on variation in freshwater mussels. This paper was done under Ortmann's direction. The latter suggested the project and the species used.

Ortmann died suddenly in 1927. Interestingly, after Ortmann's death neither Clapp, who was then 76, nor Grier, who went into other work, published anything significant on mollusks. In 1927, Stanley Truman Brooks (1902-ca. 1960), Ortmann's last student, was appointed assistant in charge of the department, and upon the receipt of his Ph.D. in 1929 was made Acting Curator. He and his wife (1931) made studies of the types in the collection. On January 25, 1933, Sterki died and his collection and library were removed to Pittsburgh. Ortmann's extensive library had been purchased by the Museum several years previously.

In 1933, Gordon M. Kutchke (subsequently changed to G. K. MacMillan) (1906- ) became associate Curator. He held this post, with a few months off in 1944 for military service, until 1951, when he went into wastewater chemistry. He made contributions to the knowledge of land mollusks. In 1936 he revamped the type collection and found

67 overlooked by the Brooks'. Brooks left the Museum in 1946 on a year's leave of absence to work for the U.S. Military Government as a scientific specialist, and subsequently went into private business.

A new era in molluscan studies began at the Museum in 1951 when Dr. Juan José Parodiz (1911- ) became Assistant Curator of Recent Invertebrates. He was not long in becoming full curator. Parodiz had spent 20 years with the Museo Argentino de Ciencias Naturales, and was *the* expert on the land mollusca of South America. Parodiz began his tenure with a 10 year survey of the freshwater gastropods of Pennsylvania. He has followed Ortmann in his interest in the naiades of South America. He has published a list of the North American unionid types (1967), and has made numerous contributions to our knowledge of the land and freshwater mollusks of the Americas, the area which has always been the museum's greatest strength.

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The above notes are mostly gleanings from a perusal of the complete Annual Reports of the Carnegie Museum (1897-1975) and from: Abbott, R. T. 1973. *American Malacologists*. First edit. Falls Church, Va.

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